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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Call et al. Attorney Docket No: MESO0045
Serial No: 10/066,404 Group Art Unit: 1743
Filed: February 1, 2002 Examiner: Lyle Alexander
Title: ROBUST SYSTEM FOR SCREENING MAIL FOR BIOLOGICAL AGENTS

DECLARATION UNDER 37 C.F.R. SECTION 1.131

Bellevue, Washington 98004

August 23, 2004

TO THE DIRECTOR OF THE PATENT AND TRADEMARK OFFICE:

The following declaration of Dr. Charles Call is submitted as part of a response to an Office Action dated April 5, 2004.

1. I, Dr. Charles Call, am a joint inventor of the invention described and claimed in the above-identified patent application and am an officer of MesoSystems Technology, Inc., a corporation to which this application has been assigned, having a product line that includes air sampling equipment like that disclosed and claimed in the above-identified patent application.

2. Prior to November 9, 2001, I and my joint inventors conceived of the invention as described and claimed in the subject application, in the United States, and we were diligent in reducing the invention to practice, from at least just before November 9, 2001 through the constructive reduction to practice that occurred by virtue of the filing of our U.S. provisional patent application, Serial No. 60/227,674, on November 13, 2001.

3. Prior to November 9, 2001, Mesosystems Technology, Inc. was contacted by Microsoft Corporation (who operates their own mail sorting equipment) to develop a system able to detect mail contaminated with a biological agent, such as anthrax. I conceived of the concept of incorporating a triggering sampler and a detecting sampler in a mail sorting unit, to detect chemical and/or biological agents in mail processed by the mail sorting unit. Rather than continuously sampling and analyzing the air within the mail sorting unit for specific chemical or biological agents, I conceived the concept of employing a triggering sampler to continuously monitor the particle count within the mail sorter. When the particle count monitored by the triggering sampler increased above

1 a background level (or if biological particles are detected), a detecting sampler would then be
2 activated to collect a sample of the particulates, so that the particulates could then be tested for a
3 specific chemical or biological agent. I determined that a particle counter capable of distinguishing
4 between biological particles and non-biological particles and sold by Pacific Science Instruments
5 could be used as a triggering sampler, that air samplers already developed by MesoSystems
6 Technology, Inc. could be used to obtain particle samples once the triggering sampler indicated a
7 substantial increase in particles, and that a polymerase chain reaction (PCR) based analytical unit
8 available from Idaho Technology could be employed to detect anthrax in a collected sample. Based
9 on my conception of combining a triggering sampler and a detection sampler in a mail sorting
10 system, MesoSystems Technology, Inc. prepared a presentation to Microsoft Corporation, in which
11 the overall concept was explained, as evidenced by a copy of the presentation attached hereto as
12 Exhibit A. It should be noted that the presentation prepared for Microsoft Corporation was created
13 using Microsoft's PowerPoint™ software, and was presented as a slideshow (i.e. an audiovisual
14 presentation) accompanied by hard copies of the PowerPoint™ slides. Exhibit A is a hardcopy of the
15 PowerPoint™ presentation (i.e. of the PowerPoint™ slides) as was provided to participants of the
16 presentation. Originally, the pages of the hard copy were not numbered. To enable specific pages of
17 the Exhibit A to be identified, page numbers have been added. However, the only changes that have
18 been made to Exhibit A are the redaction of the dates included in Exhibit A, and the addition of page
19 numbering. Exhibit A specifically uses the term trigger on pages 19, 20 and 21. On page 19, the
20 section labeled Features describes MesoSystems' CB Sentinel product as including a UV particle
21 counter trigger capable of detecting biological organisms. Once the trigger detects such an organism,
22 a sample is collected for further analysis. Page 19 of Exhibit A also specifies PSI (i.e., Pacific
23 Science Instruments) as the company supplying the trigger (note the section of page 19 labeled
24 Strategic Alliances). Page 20 of Exhibit A describes an alpha system that combines existing
25 MesoSystems' sampling technology (the BioCapture™ sampling product, which is shown on page 2
26 of Exhibit A) coupled with a UV trigger as supplied by Pacific Science Instruments, indicating such a
27 system could be operational within 12 weeks. Page 21 of Exhibit A describes a beta system that
28 would include both chemical and biological triggering samplers. Page 10 of Exhibit A specifically
29 indicates that the proposed mail sampling concept would use hardware from Pacific Science
30 Instruments (the trigger referred to on pages 19, 20 and 21 of Exhibit A), MesoSystems Technology,
Inc. (the BioCapture™ sampler referred to on pages 2, 16, 19, 20 and 21 of Exhibit A), and Idaho
Technology (a PCR based anthrax detection unit). PCR based detection is specifically identified on
pages 7, 13, 16, 19, 20 and 21 of Exhibit A. Idaho Technology is specifically identified on pages 10,
16 and 19 of Exhibit A (note page 16 specifically indicates that Idaho Technology's Rapid™ PCR
system is to be used). Clearly, the concept of combining Pacific Science Instruments' particle

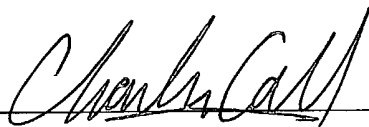
1 counter (a triggering sampler) with Mesosystems' BioCapture™ particle sampler (a detecting
2 sampler) had been conceived at the time that the presentation shown in Exhibit A was created.

3 4. Also prior to November 9, 2001, a more formal presentation (referred to as a white
4 paper), was prepared, and a copy of the white paper is attached hereto as Exhibit B. This document
5 was provided to the U.S. Government as part of a proposal to solicit funding of a working prototype,
6 and was also provided to MesoSystems Technology, Inc.'s patent attorney, to be used as a source
7 document for preparing a patent application. In particular, item 5 on page 3 of the white paper
8 specifically describes the function of the triggering sampler (although without using the term
9 "triggering sampler"), while item 6 on page 3 specifically describes the detecting sampler. On
10 page 5, Pacific Science Instruments is identified as a preferred provider of a particle counter capable
11 of distinguishing between biological particles and non-biological particles, for use as a triggering
12 sampler. On page 8, MesoSystem Technology, Inc.'s BioCapture™ sampling technology is
13 identified as a preferred implementation for a detecting sampler used to obtain a particle sample once
14 the triggering sampler has identified a potential threat. Also on page 8 of the white paper, Idaho
15 Technology's Rapid™ PCR thermocycler is identified as a preferred analytical unit to be used to
16 detect anthrax in the proposed system. While Exhibit B describes the triggering sampler and
17 detecting sampler in greater detail than does Exhibit A, it is also clear that the concept of combining a
18 triggering sampler with a detecting sampler had been conceived at the time that the presentation
19 shown in Exhibit A was created.

20 5. Each of the dates redacted from Exhibits A and B is prior to November 9, 2001.

21 6. I hereby further declare that all statements made herein of my own knowledge are true
22 and that all statements made on information and belief are believed to be true; and further, that these
23 statements were made with the knowledge that willful false statements and the like so made are
24 punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States
25 Code, and that such willful false statements may jeopardize the validity of the application or any
26 patent issued thereon.

27 Date: 23 Aug 04

28 
29 Dr. Charles Call

30 Enclosures
Exhibits A and B